

WHAT IS CLAIMED IS:

1. A method of transmitting forward link data from a sector to a mobile station in a handoff area in a CDMA communication system, comprising
 5 the steps of:

registering other sectors in an active set of the handoff mobile station as idle sectors upon request of a data service from the handoff mobile station; and

transmitting data traffic to the handoff mobile station, while the sectors designated as idle sectors discontinue transmission of data traffic and transition
 10 to an idle state.

2. The method of claim 1, further comprising the step of releasing the idle sectors from the idle state after the data traffic service to the handoff mobile station is completed.

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3. The method of claim 1, wherein upon request of data services from mobile stations, the idle sectors neglect the data service requests.

4. The method of claim 1, wherein upon request of an idle sector as
 20 to service sector of the corresponding handoff mobile station from at least two or more of the handoff mobile stations, an idle sector is set according to the request of a handoff mobile station receiving the highest signal among said handoff mobile stations requested to be idle.

25 5. A method of transmitting forward link data from a base station to a mobile station in a handoff area in a CDMA communication system, comprising the steps of:

registering other base stations in an active set of the handoff mobile station as idle base stations upon request of a data service from the handoff

mobile station; and

transmitting data traffic to the handoff mobile station, while the base stations designated as idle base stations discontinue transmission of data traffic and transition to an idle state.

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6. The method of claim 5, further comprising the step of releasing the idle base stations from the idle state after the data traffic service to the handoff mobile station is completed.

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7. The method of claim 5, wherein upon request of data services from mobile stations of the base station registered as an idle base station, the idle base stations neglect the data service requests.

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8. The method of claim 5, wherein upon request of an idle base station as to service sector of the corresponding handoff mobile station from at least two or more handoff mobile stations, an idle base station is set according to the request of a handoff mobile station receiving the highest signal among said handoff mobile stations requested to be idle.

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9. A method of transmitting forward link data from a sector to a mobile station in a handoff area in a CDMA communication system where one base station includes at least two sectors, comprising the steps of:

determining whether a sector is registered as an idle sector by referring to an idle sector memory upon request of a data service from the handoff mobile station;

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transitioning to an idle state in which the sector discontinues a forward data service if the sector is registered as an idle sector; and

registering other sectors in the active set of the handoff mobile station as idle sectors in the idle sector memory if the sector is not registered as an idle

sector, transmitting data to the handoff mobile station, and releasing the idle sectors from the idle state when the forward data service is completed.

10. The method of claim 9, further comprising the step of providing
5 forward voice services by the idle sectors.

11. A method of transmitting forward link data from a base station to a mobile station in a handoff area in a CDMA communication system, comprising the steps of:

10 determining whether a base station is registered as an idle base station by referring to an idle base station memory upon request of a data service from the handoff mobile station;

transitioning to an idle state in which the base station discontinues a forward data service if the base station is registered as an idle base station; and

15 registering other base stations in the active set of the handoff mobile station as idle base stations in the idle base station memory if the base station is not registered as an idle base station, transmitting data to the handoff mobile station, and releasing the idle base stations from the idle state when the forward data service is completed.

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12. The method of claim 11, further comprising the step of providing forward voice services by the idle base stations.

13. An apparatus for transmitting forward link data from a sector to
25 a mobile station in a handoff area in a CDMA communication system where one base station includes at least two sectors, comprising:

a base station controller for reporting an active set of a handoff mobile station;

a memory for registering sectors requested to be idle among sectors of

the active set as idle sectors; and

a plurality of sector schedulers each for storing the active set information received from the base station controller, determining whether a managed sector is registered as an idle sector in the memory, transmitting to an idle state to
 5 discontinue a forward link data service if the sector is registered as an idle sector, registering other sectors in the active set as idle sectors in the memory and transmitting data to the handoff mobile station if the sector is not registered as an idle sector, and releasing the idle sectors from the idle state when the forward link data service is completed.

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14. An apparatus for transmitting forward link data from a base station to a mobile station in a handoff area in a CDMA communication system, comprising:

a base station controller for reporting an active set of the handoff mobile
 15 station;

a memory for registering a base station requested to be idle among the base stations of the active set as idle base stations; and

a plurality of base stations each for storing the active set information received from the base station controller, determining whether the base station is
 20 registered as an idle base station in the memory, transitioning to an idle state to discontinue a forward link data service if the base station is registered as an idle base station, registering the other base stations in the active set as idle base stations in the memory and transmitting data to the handoff mobile station if the base station is not registered as an idle base station, and releasing the idle base
 25 stations from the idle state when the forward link data service is completed.

15. A method of requesting a forward link data service at a mobile station in a handoff area in a CDMA communication system, comprising the steps of:

determining a sector offering the highest reception power among sectors of an active set and generating an idle request symbol for idling other sectors except for the sector having the highest reception power in the active set; and

combining a data rate symbol with a pattern generated according to a
5 value of the idle request symbol and transmitting the combined signal.

16. The method of claim 15, wherein a data rate indicated by the data rate symbol is calculated on an assumption that there is no interference signal.

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17. The method of claim 16, wherein the transmitting idle request symbol transmits with sector information of the active set excluded in calculating the data rate.

15 18. A method of transmitting forward link data to a mobile station in a handoff area in a CDMA communication system, comprising the steps of:

determining whether an idle request symbol has been received on a reverse DRC (Data Rate Control) channel; and

blocking a sector corresponding to the idle request symbol from
20 transmitting data traffic when the idle request symbol is received and transmitting data from a serving sector to the handoff mobile station at a data rate requested by the handoff mobile station.

19. An apparatus for requesting a forward link data service from a
25 mobile station located in a handoff area in a CDMA communication system, comprising:

a controller for measuring reception powers of forward channel signals received from sectors in an active set, selecting a sector offering the highest reception power as a service sector, and generating an idle request symbol for

idling the other sectors except for the service sector in the active set and data rate control symbols for the service sector;

a pattern generator for combining the idle request symbol received from the output of the controller with a predetermined pattern; and

- 5 a combiner for combining the output of the pattern generator with the data rate control symbols and repeating the combined signal to a predetermined code length.

20. The apparatus of claim 19, wherein the data rate control symbols
10 calculated on an assumption that there is no interference signal.

21. An apparatus for providing a forward link data service to a mobile station located in a handoff area from a base station in a CDMA communication system, comprising:

- 15 a scheduler for scheduling transmission of forward traffic according to a received reverse idle request symbol;

a forward MAC channel transmitter, a pilot channel transmitter, and a traffic channel transmitter for each sector;

a plurality of multiplexers for time-division-multiplexing the outputs of
20 the MAC channel transmitters, the pilot channel transmitters, and the traffic channel transmitters; and

a plurality of transmitters for transmitting the outputs of the multiplexers.

22. The apparatus of claim 21, further comprising each switch that
25 connects and disconnects a path between the traffic channel transmitter and the multiplexers of each sector by the signals outputted from the scheduler.